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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,906	09/25/2003	Kei-Hsiung Yang	TSA120.004AUS	9188
20995	7590	12/30/2005	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP			KIM, RICHARD H	
2040 MAIN STREET			ART UNIT	
FOURTEENTH FLOOR			PAPER NUMBER	
IRVINE, CA 92614			2871	

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/672,906	<b>Applicant(s)</b> YANG ET AL.	
	<b>Examiner</b> Richard H. Kim	<b>Art Unit</b> 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (AAPA) in view of Tsubo (US 6,831,295 B2).

Referring to claim 1, AAPA discloses a device comprising a plurality of scan lines located on the first substrate and arranged in a first direction and parallel to each other (302); a plurality of common electrode lines located on the first substrate and arranged in the first direction and parallel to each other (310), wherein the plurality of scan lines and the plurality of common electrode lines are alternately located in the first direction (302, 310); a first insulating layer located over the plurality of scan lines, the plurality of common electrode lines (322); a plurality of video data lines located on the first insulating layer and arranged in parallel to each other and arranged in a second direction to cross the plurality of common electrode lines and metal lines (304), wherein any adjacent scan lines and any adjacent video lines define a pixel region (308), each pixel region comprising one of a plurality of common electrode lines (310); a second insulating layer located over the plurality of video data lines (Fig. 2c); a plurality of pixel electrodes located over the second insulating layer, each pixel electrode located at a corresponding pixel region (308); and a plurality of switch transistors respectively located at the video data lines crossing the scan line positions, wherein gate electrodes of

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the switch transistors are coupled to the scan lines and the video data lines are coupled to the pixel electrode through the switch transistors (306). However, the reference does not disclose a plurality of metal lines located on the first substrate and expanded from the plurality of common electrodes; wherein each pixel electrode is divided into a plurality of sub pixel electrodes, and at least a portion of each metal line is located between adjacent sub pixel electrodes.

Tsubo discloses a plurality of metal lines located on the first substrate and expanded from the plurality of common electrodes (28); wherein each pixel electrode is divided into a plurality of sub pixel electrodes, and at least a portion of each metal line is located between adjacent sub pixel electrodes (Fig. 14, ref. 28, 13).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a plurality of metal lines located on the first substrate and expanded from the plurality of common electrodes, wherein each pixel electrode is divided into a plurality of sub pixel electrodes, and at least a portion of each metal line is located between adjacent sub pixel electrodes since one would be motivated suppress the variance in the brightness among the pixels of the display panel to reduce the feed-through voltage (col. 8, lines 30-35).

Referring to claim 2, AAPA discloses that the first direction is perpendicular to the second direction (304, 302).

Referring to claim 3, AAPA and Tsubo et al. disclose the device previously recited, but fails to disclose that the pixel electrode is formed with an ITO or IZO material.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made for the pixel electrode to be formed with an ITO or IZO material since the use of ITO or IZO is well known in the art due to its high conductive properties.

Referring to claims 4-6, AAPA and Tsubo disclose the device previously recited, but AAPA fails to disclose that the metal lines partially overlap with the corresponding pixel electrode to form a capacitor structure, wherein the metal lines are arranged around and inside the pixel regions.

Tsubo discloses that the metal lines partially overlap with the corresponding pixel electrode to form a capacitor structure, wherein the metal lines are arranged around and inside the pixel regions (28).

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the metal lines to partially overlap with the corresponding pixel electrode to form a capacitor structure wherein the metal lines are arranged around and inside the pixel regions since one would be motivated to suppress the variance in the brightness among the pixels of the display panel to reduce the fee-through voltage (col. 4, lines 41-44).

### ***Response to Arguments***

3. Applicant's arguments filed 10/11/05 have been fully considered but they are not persuasive.

4. In response to Applicant's argument that the reference fails to disclose "each pixel electrode is divided into a plurality of sub pixel electrodes, and at least a portion of each metal line is located between adjacent sub pixel electrodes", Examiner submits that in

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Figure 14, the pixel electrode (13), is divided into a plurality of sub pixel electrode (portion above the line 28 and portion below the line 28), and at least a portion of each metal line (28) is located between adjacent sub pixel electrodes”.

5. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine, even though different from the claimed invention, is provided by the reference themselves (see Tsubo; col. 8, lines 27-34).

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

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advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard H. Kim whose telephone number is (571)272-2294. The examiner can normally be reached on 9:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard H Kim  
Examiner  
Art Unit 2871

RHK

  
ANDREW SCHECHTER  
PRIMARY EXAMINER